

9 activated by the at least one switch-on control signal for the purpose of evaluation and/or
10 storage; and wherein, during the evaluation and/or storage, the at least one information signal
11 may be or is the sole energy source for the electronic circuit.

1 2. (amended) The electronic circuit as claimed in claim 1, wherein the control means
2 can generate at least one switch-off control signal after a predetermined time has elapsed after
3 the at least one information signal arrives or when the energy converted from the at least one
4 information signal is exhausted, wherein the signal processing means can be caused or is caused
5 to effect a storage and to effect deactivation by the at least one switch-off control signal.

1 3. (amended) The electronic circuit as claimed in claim 1, wherein the information
2 stored in the at least one ferroelectric flip-flop can be converted into at least one output signal by
3 the signal processing means and the electronic circuit furthermore has at least one output for
4 outputting the at least one output signal.

1 4. (amended) The electronic circuit as claimed in claim 1, wherein the electronic
2 circuit furthermore has a display means for displaying the information stored in the at least one
3 ferroelectric flip-flop.

1 5. (amended) The electronic circuit as claimed in claim 4, wherein the display means
2 is concomitantly supplied by the voltage supply generated by the energy means.

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1 6. (amended) The electronic circuit as claimed in claim 4, wherein the display means
2 has an LCD display.

1 7. (amended) The electronic circuit as claimed in claim 3, wherein an external
2 voltage supply and external control means can be connected for the outputting of the information
3 stored in the at least one ferroelectric flip-flop by the signal processing means.

1 8. (amended) The electronic circuit as claimed in claim 1, wherein the at least one
2 switch-on control signal is comprised of the following signals: an activation signal (PRECH) for
3 activating precharge transistors of the at least one ferroelectric flip-flop; a transfer signal (PLN)
4 for transferring the information contained in ferroelectric capacitors of the at least one
5 ferroelectric flip-flop onto internal data lines of the at least one ferroelectric flip-flop; and a
6 current switching signal (NSET) for switching on the voltage supply of the signal processing
7 means.

1 9. (amended) The electronic circuit as claimed in claim 2, wherein the at least one
2 switch-off control signal is comprised of the following signals: a transfer end signal (PLN); an
3 activation signal (PRECH) for activating precharge transistors of the at least one ferroelectric
4 flip-flop; and a current switch-off signal (NSET) for switching off the voltage supply of the
5 signal processing means.

1 10. (amended) The electronic circuit as claimed in claim 8, wherein signal lines for
2 each of the switch-on signals lead from the control means to the signal processing means.


1 11. (amended) The electronic circuit as claimed in claim 9, wherein signal lines for
2 each of the switch-off signals lead from the control means to the signal processing means.

1 12. (amended) The electronic circuit as claimed in claim 11, characterized in that, for
2 the transfer signal and the transfer end signal, a common transfer signal line leads from the
3 control means to the signal processing means, the transfer signal consists in the application of a
4 voltage to the common transfer signal line and the transfer end signal consists in the
5 disconnection of the voltage on the common transfer signal line.

1 13. (amended) The electronic circuit as claimed in claim 11, characterized in that, for
2 the current switching signal and the current switch-off signal, a common current signal line leads
3 from the control means to the signal processing means, the current switching signal consists in
4 the application of a voltage to the common current signal line and the current switch-off signal
5 consists in the disconnection of the voltage on the common current signal line.

1 14. (amended) The electronic circuit as claimed in claim 1, wherein the signal
2 processing circuit is a counting circuit for evaluating a plurality of information signals, which
3 arrive successively or simultaneously, by counting the information signals that have arrived.

1 15. (amended) The electronic circuit as claimed in claim 14, wherein the counting
2 circuit comprises a plurality of cascaded edge-controlled ferroelectric flip-flops, in which the at
3 least one information signal is input into the clock input (CLK) of the first ferroelectric flip-flop
4 of the plurality of cascaded ferroelectric flip-flops and the output (Q) of each of the ferroelectric
5 flip-flops, except for the last, is in each case also connected to the clock input (CLK) of the
6 ferroelectric flip-flop connected downstream.

1 16. (amended) A method for storing information comprising at least one information
2 signal or information obtained through evaluation of the at least one information signal in at least
3 one ferroelectric flip-flop in a signal processing means, having the following steps: A: generating
4 at least one switch-on control signal from an information signal that has arrived, and generating a
5 voltage supply from energy contained in the at least one information signal; B: activating the
6 signal processing means by the switch-on control signal and applying the voltage supply to the
7 signal processing means; C: storing an information item represented by the at least one
8 information signal by means of at least one ferroelectric flip-flop and/or evaluating an
9 information item represented by the at least one information signal and storing the secondary
10 information obtained through the evaluation by means of at least one ferroelectric flip-flop; D:
11 generating a switch-off control signal after a predetermined time has elapsed after the at least one
12 information signal arrives and/or when the energy converted from the at least one information
13 signal is exhausted; and E: deactivating the signal processing means by the switch-off control
14 signal.

1 17. (amended) The method as claimed in claim 16, wherein step B further comprises
2 the sub-steps: B1: activating precharge transistors of the at least one ferroelectric flip-flop by
3 applying a voltage; B2: deactivating the precharge transistors of the at least one ferroelectric flip-
4 flop by disconnecting the voltage; B3: applying a voltage to ferroelectric capacitors of the at
5 least one ferroelectric flip-flop for transferring the information stored in the ferroelectric
6 capacitors to logic gates of the at least one ferroelectric flip-flop; and B4: activating the voltage
7 supply of the logic gates of the at least one ferroelectric flip-flop.

1 18. (amended) The method as claimed in claim 16, wherein step E further comprises
2 the sub-steps: E1: disconnecting a voltage present across ferroelectric capacitors of the at least

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3 one ferroelectric flip-flop; E2: deactivating the voltage supply of the logic gates of the at least
4 one ferroelectric flip-flop; E3: activating precharge transistors of the at least one ferroelectric
5 flip-flop by applying a voltage; and E4: deactivating the precharge transistors of the at least one
6 ferroelectric flip-flop by disconnecting the voltage.

1 19. (amended) The method as claimed in claim 16, wherein the electronic circuit
2 contains a plurality of ferroelectric flip-flops and the evaluation comprises a summation of the
3 value represented by the information signal and a value already stored in the ferroelectric flip-
4 flops.

5 20. (amended) The method as claimed in claim 19, wherein the summation is effected
6 by means of a counting operation in which the plurality of ferroelectric flip-flops are cascaded in
7 a counter arrangement and an arriving information signal increments or decrements a counter
8 reading of the counter arrangement by the value 1.

9 21. (amended) The method as claimed in claim 16, wherein the information stored in
10 the at least one ferroelectric flip-flop can be converted into at least one output signal and be
11 output from the electronic circuit.

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1 22. (amended) The use of ferroelectric flip-flops for electronic circuits, wherein the
2 electronic circuit can detect and/or evaluate information signals and results of the detection
3 and/or evaluation can be stored in at least one ferroelectric flip-flop, characterized in that the
4 entire energy required for the detection, processing and storage can be generated from the
5 information signal.

1 23. (amended) The use as claimed in claim 22, wherein the evaluation comprises
2 counting the arriving information signals.

1 24. (amended) The use as claimed in claim 23, wherein the electronic circuit can
2 count up or count down arriving information signals.

1 25. (amended) The use as claimed in claim 22, wherein the electronic circuit is used
2 in a liquid counter.

1 26. (amended) A liquid counter for determining the flow of liquids through a system,
2 comprising: a sensor which can generate or generates information signals depending on a
3 quantity of liquid flowing through the system; and an electronic circuit as claimed in claim 1 for
4 counting the information signals generated by the sensor; wherein the information signals are the
5 sole energy source for the electronic circuit.

In the Claims

1 1. (amended) 1. Electronic circuit [(1)], [having] comprising an input [(5)] for
2 inputting at least one information signal; an energy means [(2)] for converting energy contained
3 in the at least one information signal into a voltage supply; a control means [(3)] for generating
4 at least one switch-on control signal when an information signal arrives; and a signal processing
5 means [(4)] for storing an information item represented by the at least one information signal by
6 means of at least one ferroelectric flip-flop and/or for evaluating an information item represented
7 by the at least one information signal and storing the secondary information obtained through the
8 evaluation by means of the at least one ferroelectric flip-flop [(26)]; wherein the signal
9 processing means [(4)] can be activated by the at least one switch-on control signal for the
10 purpose of evaluation and/or storage; and wherein, during the evaluation and/or storage, the at
least one information signal may be or is the sole energy source for the electronic circuit [(1)].

1 2. (amended) The electronic circuit as claimed in claim 1, [characterized in that]
2 wherein the control means [(3)] can generate at least one switch-off control signal after a
3 predetermined time has elapsed after the at least one information signal arrives [and/]or when the
4 energy converted from the at least one information signal is exhausted, wherein the signal
5 processing means [(4)] can be caused or is caused to effect a storage and to effect deactivation by
6 the at least one switch-off control signal.

1 3. (amended) The electronic circuit [(1)] as claimed in claim 1 [or 2], [characterized
2 in that] wherein the information stored in the at least one ferroelectric flip-flop [(26)] can be
3 converted into at least one output signal by the signal processing means [(4)] and the electronic
4 circuit [(1)] furthermore has at least one output [(6)] for outputting the at least one output signal.

1 4. (amended) The electronic circuit[s] [(1)] as claimed in [one of] claim[s] 1 [to 3],
2 [characterized in that] wherein the electronic circuit furthermore has a display means [(10)] for
3 displaying the information stored in the at least one ferroelectric flip-flop [(26)].

1 5. (amended) The electronic circuit [(1)] as claimed in claim 4, [characterized
2 in that] wherein the display means [(10)] is concomitantly supplied by the voltage supply
3 generated by the energy means [(2)].

1 6. (amended) The electronic circuit [(1)] as claimed in claim 4 [or 5], [characterized
2 in that] wherein the display means [(10)] has an LCD display [(11)].

1 7. (amended) The electronic circuit [(1)] as claimed in [one of] claim[s] 3 [to 6],
2 [characterized in that] wherein an external voltage supply and external control means can be
3 connected for the outputting of the information stored in the at least one ferroelectric flip-flop
4 [(26)] by the signal processing means [(4)].

1 8. (amended) The electronic circuit [(1)] as claimed [one of] claim[s] 1 [to 7],
2 [characterized in that] wherein the at least one switch-on control signal [has] is comprised of the
3 following signals: an activation signal (PRECH) for activating precharge transistors [(18,19)] of
4 the at least one ferroelectric flip-flop [(26)]; a transfer signal (PLN) for transferring the
5 information contained in ferroelectric capacitors [(14,15)] of the at least one ferroelectric flip-
6 flop [(26)] onto internal data lines [(22,23)] of the at least one ferroelectric flip-flop [(26)]; and a
7 current switching signal (NSET) for switching on the voltage supply of the signal processing
8 means [(4)].

1 9. (amended) The electronic circuit [(1)] as claimed in [one of] claim[s] 2 [to 8],
2 [characterized in that] wherein the at least one switch-off control signal [has] is comprised of the
3 following signals: a transfer end signal (PLN); an activation signal (PRECH) for activating
4 precharge transistors [(18,19)] of the at least one ferroelectric flip-flop [(26)]; and a current
5 switch-off signal (NSET) for switching off the voltage supply of the signal processing means
6 [(4)].

1 10. (amended) The electronic circuit [(1)] as claimed in claim 8 [or 9], [characterized
2 in that] wherein signal lines [(8)] for each of the switch-on signals lead from the control means
3 [(3)] to the signal processing means [(4)].

1 11. (amended) The electronic circuit [(1)] as claimed in claim 9 [or 10],
2 [characterized in that] wherein signal lines [(8)] for each of the switch-off signals lead from the
3 control means [(3)] to the signal processing means [(4)].

1 12. (amended) The electronic circuit [(1)] as claimed in claim 11, characterized in
2 that, for the transfer signal and the transfer end signal, a common transfer signal line leads from
3 the control means [(3)] to the signal processing means [(4)], the transfer signal consists in the
4 application of a voltage to the common transfer signal line and the transfer end signal consists in
5 the disconnection of the voltage on the common transfer signal line.

1 13. (amended) The electronic circuit [(1)] as claimed in claim 11 [or 12],
2 characterized in that, for the current switching signal and the current switch-off signal, a
3 common current signal line leads from the control means [(3)] to the signal processing means
4 [(4)], the current switching signal consists in the application of a voltage to the common current
5 signal line and the current switch-off signal consists in the disconnection of the voltage on the
6 common current signal line.

1 14. (amended) The electronic circuit [(1)] as claimed in [one of] claim[s] 1 [to 13],
2 [characterized in that] wherein the signal processing circuit [(4)] is a counting circuit for
3 evaluating a plurality of information signals, which arrive successively or simultaneously, by
4 counting the information signals that have arrived.

1 15. (amended) The electronic circuit [(1)] as claimed in claim 14, [characterized in
2 that] wherein the counting circuit comprises a plurality of cascaded edge-controlled ferroelectric
3 flip-flops [(34)], in which the at least one information signal is input into the clock input (CLK)
4 of the first ferroelectric flip-flop [(34)] of the plurality of cascaded ferroelectric flip-flops [(34)]
5 and the output (Q) of each of the ferroelectric flip-flops [(34)], except for the last, is in each case
6 also connected to the clock input (CLK) of the ferroelectric flip-flop [(34)] connected
7 downstream.

1 16. (amended) A method for storing information [represented by] comprising at least
2 one information signal or information obtained through evaluation of the at least one information
3 signal in at least one ferroelectric flip-flop [(26)] in a signal processing means [(4)], having the
4 following steps: A: generating at least one switch-on control signal from an information signal
5 that has arrived, and generating a voltage supply from energy contained in the at least one
6 information signal; B: activating the signal processing means [(4)] by the switch-on control
7 signal and applying the voltage supply to the signal processing means [(4)]; C: storing an
8 information item represented by the at least one information signal by means of at least one
9 ferroelectric flip-flop and/or evaluating an information item represented by the at least one
10 information signal and storing the secondary information obtained through the evaluation by
11 means of at least one ferroelectric flip-flop [(26)]; D: generating a switch-off control signal after
12 a predetermined time has elapsed after the at least one information signal arrives and/or when the
13 energy converted from the at least one information signal is exhausted; and E: deactivating the
14 signal processing means [(4)] by the switch-off control signal.

15 17. (amended) The method as claimed in claim 16, [characterized in that] wherein
16 step B [has] further comprises the sub-steps: B1: activating precharge transistors [(18,19)] of the
17 at least one ferroelectric flip-flop [(26)] by applying a voltage: B2: deactivating the precharge
18 transistors [(18,19)] of the at least one ferroelectric flip-flop [(26)] by disconnecting the voltage;
19 B3: applying a voltage to ferroelectric capacitors [(14,15)] of the at least one ferroelectric flip-
20 flop [(26)] for transferring the information stored in the ferroelectric capacitors [(14,15)] to logic
21 gates [(12,13,24,25)] of the at least one ferroelectric flip-flop [(26)]; and B4: activating the
22 voltage supply of the logic gates [(12,13,24,25)] of the at least one ferroelectric flip-flop [(26)].

1 18. (amended) The method as claimed in claim 16 [or 17], [characterized in that]
2 wherein step E [has] further comprises the sub-steps: E1: disconnecting a voltage present across
3 ferroelectric capacitors [(14,15)] of the at least one ferroelectric flip-flop [(26)]; E2: deactivating
4 the voltage supply of the logic gates [(12,13,24,25)] of the at least one ferroelectric flip-flop
5 [(26)]; E3: activating precharge transistors [(18,19)] of the at least one ferroelectric flip-flop
6 [(26)] by applying a voltage; and E4: deactivating the precharge transistors [(18,19)] of the at
7 least one ferroelectric flip-flop [(26)] by disconnecting the voltage.

1 19. (amended) The method as claimed in [one of] claim[s] 16 [to 18], [characterized
2 in that] wherein the electronic circuit [(1)] contains a plurality of ferroelectric flip-flops [(26)]
3 and the evaluation comprises a summation of the value represented by the information signal and
4 a value already stored in the ferroelectric flip-flops [(26)].

1 20. (amended) The method as claimed in claim 19, [characterized in that] wherein the
2 summation is effected by means of a counting operation in which the plurality of ferroelectric
3 flip-flops [(26)] are cascaded in a counter arrangement and an arriving information signal
4 increments or decrements a counter reading of the counter arrangement by the value 1.

1 21. (amended) The method as claimed in [one of] claim[s] 16 [to 20], [characterized
2 in that] wherein the information stored in the at least one ferroelectric flip-flop [(26)] can be
3 converted into at least one output signal and be output from the electronic circuit [(1)].

1 22. (amend the use of ferroelectric flip-flops [(26)] electronic circuits, wherein
2 the electronic circuit [(1)] can detect and/or evaluate information signals and results of the
3 detection and/or evaluation can be stored in at least one ferroelectric flip-flop [(26)],
4 characterized in that the entire energy required for the detection, processing and storage can be
5 generated from the information signal.

1 23. (amended) The use as claimed in claim 22, [characterized in that] wherein the
2 evaluation comprises counting the arriving information signals.

1 24. (amended) The use as claimed in claim 23, [characterized in that] wherein the
2 electronic circuit [(1)] can count up or count down arriving information signals.

1 25. (amended) The use as claimed in claim 22 [or 23], [characterized in that] wherein
2 the electronic circuit [(1)] is used in a liquid counter.

1 26. (amended) A liquid counter for determining the flow of liquids through a system,
2 [having] comprising: a sensor which can generate or generates information signals depending on
3 a quantity of liquid flowing through the system; and an electronic circuit [(1)] as claimed in [one
4 of] claim[s] 1 [to 14] for counting the information signals generated by the sensor; wherein the
5 information signals are the sole energy source for the electronic circuit [(1)].